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EXAMINER

NGUYEN BA, HOANG VU A

ART UNIT	PAPER NUMBER
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2192

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,011

Applicant(s)

JENTSCH ET AL.

Examiner

Hoang-Vu A. Nguyen-Ba

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/14/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed July 3, 2003.
2. Claims 1-24 have been examined.

Priority

3. The priority date considered for this application is July 4, 2002, which is the filing date of the Application No. EP 02014790.6. A certified copy of the priority application has been received and placed in the application file.

Oath/Declaration

4. The Office acknowledges receipt of a properly signed oath/declaration filed November 3, 2003.

Information Disclosure Statement

5. The Office acknowledges receipt of the Information Disclosure Statement filed October 14, 2003. It has been placed in the application file and the information referred to therein has been considered.

Drawings

6. The drawings filed July 3, 2003 are accepted by the examiner.

Specification

7. The specification is objected to because of the following minor informalities:
 - a. The Abstract recites “[s]oftware means may be provided” at line
 2. The recitation of the limitation is in permissive language. The

broadest reasonable interpretation of this limitation is that the “software means” is optional feature. The use of the verb “may be” renders the claim invention indefinite because it is unclear whether or not the software means is included in the subject matter of the invention. Accordingly, any arguments that this feature provides patentable distinction over the prior art will be unpersuasive.

b. The use of trademarks, such as Visual Basic has been noted in this application (p. 10, lines 5-6). Visual Basic™ is a trademark of Microsoft®, Inc. Trademarks should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in a manner which might adversely affect their validity as trademarks.

To expedite correction on this matter, the examiner suggests the following guidelines for Applicant to follow in amending the specification:

- i. capitalize each letter of a trademark or accompany the trademark with an appropriate designation symbol, e.g., TM or ®, as appropriate;
- ii. use each trademark as an adjective modifying a description noun. For example, it would be appropriate to recite “the JAVA platform” or “the JAVA programming language.” Note that in these examples, “platform” and “programming language” provide accompanying generic terminology, describing the context in which the

trademark is used. By itself, the trademark JAVA specifies only the source of the so-labeled products, namely SUN Microsystems, Inc.

Claim Objection

8. Claims 6 and 17 are objected to because of the following minor informalities: the limitation “the debugging process” could be changed to – the debugging – to have proper antecedent basis.

Double Patenting

9. The non-statutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper time wise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ 2d 2010 (Fed. Cir. 1993); *In re Long*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1993); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Voge*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.103(c) 1.321(c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.37(b).

10. Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 10/611,860.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Copending Claim 2	Instant Claim 1
A method for debugging a computer program code by using a debugging software, wherein software means are provided for causing the debugging software to stop at one or more types of breakpoints set in the computer program code, the method comprising:	A method for debugging a computer program code by using a debugging software, the method comprising:
	providing a software means for causing the debugging software to stop at a breakpoint set in the computer program code; and
debugging a program code, the program code including at least one type of breakpoint; and	
activating or deactivating all breakpoints of the at least one type by a single action.	
stopping the debugging software at a breakpoint based upon one or more predefinable conditions.	making the stopping of the debugging software dependent upon one or more predefinable conditions.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter of the invention recited in instant Claim 1 appears to be anticipated by that recited in copending Claim 2.

As can be seen from the table, the only difference between instant Claim 1 and copending Claim 2 is that the copending claim contains two additional limitations (i.e., *debugging a program code, the program code including at least one type of breakpoint and activating or deactivating all breakpoints of the at least one type by a single action*). These two method steps are deemed inherent and essential steps performed during the debugging process in instant claim 1. Without a breakpoint set in the program code, there would be no means for causing the debugging software to stop at the set breakpoint in the computer program code of instant claim 1. Without activation, the breakpoint set in step 1 of instant claim would be inoperative.

Therefore, these two steps do not contain distinct subject matter distinguishing instant Claim 1 over copending Claim 2.

The same rationale is also applicable for the remaining conflicting claims, e.g., instant claim 12 vs copending claim 13, instant claim 23 vs copending claim 23 and instant claim 24 vs copending claim 24.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. Claims 23 and 24 are rejected under 35 U.S.C § 101 because the claimed invention is directed to non-statutory subject matter.

Claim 23 recites a computer readable medium. Since Applicants' disclosure, at bottom of ¶ [0034], indicates that computer-readable media encompass propagation medium, a broad and reasonable interpretation of the

propagation medium would include carrier wave, which is a waveform suitable for modulation by an information-bearing signal.

A carrier wave is clearly not a “process” under 35 U.S.C. § 101 because it is not a series of steps. The other three § 101 classes of machine, compositions of matter and manufactures “relate to structural entities and can be grouped as ‘product’ claims in order to contrast them with process claims.” 1 D. Chisum, Patents § 1.02 (1994). The three product classes have traditionally required physical structure or material.

A claimed carrier wave has no physical structure, does not itself perform any useful, concrete and tangible result and, thus, does not fit within the definition of a machine.

A claimed carrier wave is not matter, but a form of energy, and therefore is not a composition of matter.

A product is a tangible physical article or object, some form of matter, which a carrier wave is not. That the other two product classes, machine and composition of matter, require physical matter is evidence that a manufacture was also intended to require physical matter. A carrier wave, a form of energy, does not fall within one of the four statutory classes of § 101.

Accordingly, a carrier wave has no physical structure and does not perform any useful, concrete and tangible result.

Also see Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, October 26, 2005, Annex IV(c).

Claim 24 recites a computer data signal embodied in a carrier wave. Since the disclosure does not provide any definition of the carrier wave claimed in Claim 24, a broad and reasonable interpretation will be given to the term

carrier wave. According to Wikipedia, a carrier has several very different meanings in science. For example, in physics, a carrier is a carrier wave, which is a waveform suitable for modulation by an information-bearing signal.

See aforementioned discussion for reasons why a claim to a carrier wave is not statutory under 35 U.S.C. § 101.

Claim Rejections – 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejection under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rosenberg, How Debuggers Work, September 27, 1996, *Wiley Computer Publishing*.

Claim 1

Rosenberg discloses at least *A method for debugging a computer program code by using of a debugging software, the method comprising:*

providing a software means for causing the debugging software to stop at a breakpoint set in the computer program code (see at least Chapter 5, pp. 95-101; see Table 5.2 for a list of breakpoint types); and

making the stopping of the debugging software dependent upon one or more predefinable conditions (see at least Table 5.2, e.g., “user breakpoint;”

Chapter 6, "Breakpoint Data Structures," e.g., p. 108, last three lines, p. 109, 1st ¶).

Claim 2

Rosenberg further discloses *wherein: the one or more predefinable conditions are different for at least two breakpoints* (see at least Chapter 6, section "Temporary Breakpoints," e.g., the predefined condition of a run-to-main is to quickly execute past all startup code and to stop on a program's main routine whereas that of a run-to-here is to allow the user to point to source code where she/he desires the program counter to be and quickly have the debuggee execute up to that point).

Claim 3

Rosenberg does not specifically disclose *storing the one or more predefinable conditions in a data array*. However, this feature is deemed inherent to Rosenberg as Chapter 5, section "Breakpoint, Single-step Events" indicates that when the notification is breakpoint, the debugger needs to check its stored list of breakpoints to find out which breakpoint has been hit. See also FIG. 6.2, "Simple physical breakpoint structure" which data that are apparently stored in a data array. Without breakpoint data being stored in an array or structure, it would not be possible for the debugger to check its stored list of breakpoints.

Claim 4

Rosenberg further discloses *the one or more predefinable conditions are identical for a predefinable type of breakpoint* (see at least Chapter 6, "Requirements for

Breakpoint Algorithms,” “Breakpoints set in not-yet-loaded modules must be resolved when these modules get loaded”).

Claim 5

Rosenberg further discloses *storing the one or more predefinable conditions in a data array which is accessible for only one type of breakpoint* (see at least Chapter 6, “Breakpoint Data Structures,” e.g., the “logical breakpoints” which usually correspond to those set by the user and which are stored in a structure; see also discussion in claim 3 for the inherent data array in Rosenberg).

Claim 6

Rosenberg further discloses *the one or more predefinable conditions are changeable during the debugging process* (see at least Chapter 6, “Breakpoint Data Structures,” e.g., the “logical breakpoints” which usually correspond to those set by the user).

Claim 7

Rosenberg does not specifically disclose *storing the one or more predefinable conditions in a non-volatile memory*. However, this feature is deemed inherent to Rosenberg as Chapter 5, section “Breakpoint, Single-step Events” indicates that when the notification is breakpoint, the debugger needs to check its stored list of breakpoints to find out which breakpoint has been hit. Without breakpoint data being stored in a non-volatile memory, it would not be possible for the debugger to check its stored list of breakpoints.

Claim 8

Rosenberg further discloses *setting the breakpoint with a macro call, the macro comprising the breakpoint* (see at least Chapter 5, section “Causing the Debuggee to Run,” e.g., “[t]he debugger is the active process and makes a **call** into the operating system to initiate the debuggee”).

Claim 9

Rosenberg further discloses *wherein the data array is editable by using a screen mask* (see at least Chapter 2, FIGs. 2.6-2.9).

Claim 10

Rosenberg does not specifically disclose *wherein: the data array is a table*. However, this feature is deemed inherent to Rosenberg as Chapter 5, section “Breakpoint, Single-step Events” indicates that when the notification is breakpoint, the debugger needs to check its stored list of breakpoints to find out which breakpoint has been hit. Without breakpoint data being stored in an array or structure, it would not be possible for the debugger to check its stored list of breakpoints. It should also be noted that an array is a table.

Claim 11

Rosenberg further discloses *wherein: the data array is accessible for read and write operations via a graphical user interface* (see at least Chapter 2, FIGs. 2.6-2.9).

Claim Rejections – 35 USC § 103

17. The following is a quotation of the 35 U.S.C. § 103(a) which form the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 12-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosenberg, *How Debuggers Work*, September 27, 1996, *Wiley Computer Publishing*.

Claim 12

Rosenberg discloses at least a method *for debugging computer program code by using a debugging software, wherein software means are provided for causing the debugging software to stop at a breakpoint set in the computer program code, the method comprising:*
program instructions (Chapter 2, FIG. 2.4, “Source code with breakpoints”);
an input means for entering data (see at least Chapter 2, FIGs. 2.6-2.9);
a storage means for storing data (see discussion in claims 3, 5 and 7); and
stopping the debugging software at a breakpoint dependent upon one or more predefinable conditions (see at least Table 5.2, e.g., “user breakpoint,” Chapter 6, “Breakpoint Data Structures,” e.g., p. 108, last three lines, p. 109, 1st ¶).

Rosenberg does not specifically disclose a *computer system comprising a memory and a processor*. However, Official notice is taken that it is well known in the art that in order for a computer program (e.g., a debugging software) to perform the programmed functions, thereby having an utility, the computer program has to be embodied in a computer system comprising at least a processor and a memory system. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to install Rosenberg’s debugging software on a computer system because this would

permit the debugging software's functionality to be realized, thereby having an utility.

Claim 13

Since claim 13 recites the same feature of claim 2, the same rejection is applied.

Claim 14

Since claim 14 recites the same feature of claim 3, the same rejection is applied.

Claim 15

Since claim 15 recites the same feature of claim 4, the same rejection is applied.

Claim 16

Since claim 16 recites the same feature of claim 5, the same rejection is applied.

Claim 17

Since claim 17 recites the same feature of claim 6, the same rejection is applied.

Claim 18

Since claim 18 recites the same feature of claim 7, the same rejection is applied.

Claim 19

Since claim 19 recites the same feature of claim 8, the same rejection is applied.

Claim 20

Since claim 20 recites the same feature of claim 9, the same rejection is applied.

Claim 21

Since claim 21 recites the same feature of claim 10, the same rejection is applied.

Claim 22

Since claim 22 recites the same feature of claim 11, the same rejection is applied.

Claim 23

Since claim 23 recites a computer-readable medium comprising instructions for performing the same method step(s) of any one of claims 1 to 11, the same rejections are applied.

Claim 24

Since claim 24 recites a computer data signal embodied in a carrier wave comprising computer executable instructions, which cause a computer to

provide means for performing the same method step(s) of any one of claims 1 to 11, the same rejections are applied.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The examiner can normally be reached on Tuesday-Friday from 7:45 am to 6:15 pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Tuan Dam can be reached at (571) 272-3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the

Private PAIR system, contact the Electronic Business Center (EBC) at (866)
217-9197 (toll-free).

A handwritten signature in black ink, reading "Hoang Anthony Nguyen Ba". The signature is written in a cursive, flowing style.

ANTONY NGUYEN-BA
PRIMARY EXAMINER
April 22, 2006